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May 31, 2006
Project No. 2029-2400-01

Mr. Barry Marcus
Sacramento County Environmental Management Department
8475 Jackson Road, Suite 230
Sacramento, CA 95826-3904

Subject: Soil Vapor Extraction Test Report
Kwik Serv Fueling Station
2400 Fruitridge Road
Sacramento, California
LOP #G028

Dear Mr. Marcus:

On behalf of Mr. Bal Soin, Stratus Environmental, Inc. (Stratus) has prepared this *Soil Vapor Extraction Test Report* for the Kwik Serv Fueling Station (the site), located at 2400 Fruitridge Road, Sacramento, California (Figure 1). Stratus has previously recommended that the environmental case at this site be considered for closure. In a letter dated February 16, 2005, Sacramento County Environmental Management Department (SCEMD) requested that a soil vapor extraction (SVE) test be completed to evaluate the feasibility of extracting petroleum hydrocarbon laden soil vapors from the subsurface. Stratus personnel completed the requested SVE test consistent with the activities presented in *Well Installation and Soil Vapor Extraction Test Work Plan* (submitted May 3, 2005, approved by SCEMD letter dated May 5, 2005). Details and findings associated with completion of the SVE testing activities are discussed in the following subsections of this report.

SITE DESCRIPTION

The subject site is an operating service station situated on the southeastern corner of the intersection of Fruitridge Road and 24th Street, in Sacramento, California (Figure 1). The existing fuel storage system consists of one 12,000-gallon gasoline and two 10,000-gallon gasoline underground storage tanks (USTs), located in the northwestern portion of the property. There are five dispenser islands with associated product lines, four in the north central region and one in the west central region of the site. Figure 2 depicts the approximate locations of the USTs, dispensers, and associated product lines.

SITE BACKGROUND

The following was summarized from information obtained from SCEMD records, reports prepared by consultants representing previous service station operators, and work completed by Stratus. Former UST, soil boring, and monitoring well locations discussed in this section are illustrated on Figure 2.

Three USTs (10,000-gallon and 8,000-gallon tanks used to store regular unleaded gasoline, and one 6,000-gallon tank used to store premium unleaded gasoline) were removed from the site on June 29, 1987. These USTs were reportedly situated in the southwestern corner of the subject property. Total petroleum hydrocarbons as gasoline (TPHG) were apparently reported at concentrations up to 77 milligrams per kilogram (mg/Kg); sampling locations, analytical data tables, or certified analytical results were not located in the SCEMD records. An overexcavation was reportedly completed to remove hydrocarbon impacted soil in this area. Additional soil sampling apparently confirmed that the hydrocarbon impacted soil was removed from this area.

A 250-gallon waste oil UST was removed from the site in July 1987. The waste oil UST was situated on the south side of the station building, and a 990-gallon waste oil UST was installed in the same general area at this time. Gravimetric waste oil as petroleum oil (200 mg/Kg) was detected in a soil sample collected within the former UST cavity area.

A groundwater monitoring well (MW-1) was installed immediately west of the former waste oil UST in October 1987. This well was later re-named EW-1 in 1992. Well MW-1/EW-1 was sampled 16 times between October 1987 and August 1995. TPHG and benzene, toluene, ethylbenzene, and xylene (BTEX) concentrations were predominately reported below laboratory detection limits. TPHG and benzene were detected at maximum concentrations of 52 micrograms per liter ($\mu\text{g/L}$) and 0.98 $\mu\text{g/L}$, respectively, for samples collected during this 8-year period. Total oil and grease (O&G) was reported in two samples collected from the well, at concentrations of 70 $\mu\text{g/L}$ and 500 $\mu\text{g/L}$.

Three soil borings (B-1 through B-3) were advanced to approximately 21.5 feet below ground surface (bgs) on October 19, 1990. Each boring was advanced within approximately 10 feet of the 990-gallon waste oil UST. O&G was apparently reported in samples collected from 6 feet bgs, at concentrations up to 530 mg/Kg. Soil samples collected from 11, 16, and 21 feet bgs were reportedly not impacted with O&G.

On December 18, 1991, the 990-gallon waste oil UST was removed from the site. An overexcavation was subsequently completed to remove hydrocarbon impacted soil in this area. The dimensions of the excavation were approximately 23 feet in the east-west direction and 20 feet in the north-south direction. Soil immediately beneath the former waste oil UST was removed to approximately 15 feet bgs; soil around the perimeter of

the former waste oil UST cavity was removed to approximately 7 feet bgs. The excavation was backfilled with pea gravel.

Three additional groundwater monitoring wells (MW-1 through MW-3) were installed on October 19, 1992. Groundwater was encountered at approximately 41 feet bgs at this time. Petroleum hydrocarbons were not detected in any of the soil samples collected from well borings MW-1 through MW-3. TPHG and benzene were not detected in groundwater samples collected from these wells between November 1992 and August 1995. Radial groundwater flow, to the north, northeast, east, and southeast away from well MW-2, was consistently reported for monitoring events completed in 1994 and 1995. Wells EW-1 and MW-1 through MW-3 appear to have been abandoned. Information regarding abandonment of these wells is not currently available to Stratus.

MVP Petroleum Engineers, Inc. (MVP) removed one 550-gallon fiberglass waste oil UST, and replaced five fuel dispensers with associated product piping, on behalf of Kwik Serv, in December 2002 and January 2003. The former waste oil UST was situated in the same general area as the previous waste oil USTs. This fiberglass waste oil UST appeared to be in good condition. Compliance samples were not collected beneath the former waste oil UST due to extensive pea gravel in the excavation.

Analytical results from soil samples collected beneath the dispenser islands and along the product lines in December 2002, indicated petroleum hydrocarbons were present beneath the western dispenser island at depths of 3 to 4.5 feet bgs, and in the piping trench leading to the western dispenser island at a depth of 3 feet bgs. Low concentrations of petroleum hydrocarbons were also detected along the other product lines that supply the north central fuel dispensers at a depth of 3 feet bgs. TPHG was reported at a maximum concentration of 2,400 mg/Kg at 4.5 feet bgs beneath the western dispenser island. The fuel additive methyl tertiary butyl ether (MTBE) was reported beneath the western dispenser and along the associated product lines at a maximum concentration of 20 mg/Kg.

Stratus oversaw the advancement of six exploratory soil borings (B-1 through B-6) on-site between August 16 and 18, 2004, to further characterize subsurface petroleum hydrocarbon impact beneath the site. Groundwater was encountered at approximately 29 feet bgs at the time of this investigation. Fuel-based petroleum hydrocarbon concentrations were reported below laboratory detection limits for all soil samples collected from the borings. MTBE was detected in groundwater samples collected from three of the soil borings, at concentrations ranging from 0.98 µg/L to 12 µg/L.

Stratus submitted a *Water Supply Well Survey Report* on February 7, 2005, following an evaluation of water supply well usage in the site vicinity. The only water supply well identified during a California Department of Water Resources (DWR) records review and

field reconnaissance, known to be currently in use, is situated approximately 2,100 feet south of the site and is screened below 282 feet bgs. Based on the findings of the water supply well survey, Stratus concluded that potential risk to water supply wells resulting from dissolved petroleum hydrocarbon impact beneath the site was very low.

Stratus directed the installation of groundwater monitoring well MW-4, and vapor extraction wells VW-1 and VW-2, on October 31, 2005. Installation of these wells was documented in *Well Installation Report, February 7, 2006*.

Two groundwater sampling events have been completed at well MW-4. MTBE was reported at a concentration of 8.9 µg/L for the sample collected during the initial sampling event. MTBE was reported below laboratory detection limits for the sample collected during the most recent sampling event (March 9, 2006). TPHG, BTEX, and additional fuel additives have not been detected in the well MW-4 samples.

SOIL VAPOR EXTRACTION TESTS

The SVE tests were conducted to evaluate soil vapor extraction rates, extractable concentrations of petroleum hydrocarbons in soil vapors, and radius of influence (ROI) around each extraction well. The data collected was used to evaluate the feasibility of extracting residual hydrocarbons that may be present within vadose zone soil beneath the site.

Before beginning the SVE tests, Sacramento Metropolitan Air Quality Management District (SMAQMD) and the station manager were notified regarding the test schedule and duration of the testing. A site-specific safety plan was developed and discussed before beginning the SVE tests to ensure safe operation.

Test Well Descriptions

Stratus utilized existing wells VW-1, VW-2, and MW-4 to conduct the SVE testing and monitoring. Each well was constructed using 2-inch diameter schedule 40 PVC well casing and factory slotted well screen. Wells VW-1 and VW-2 are screened from approximately 3 to 18 feet bgs, and well MW-4 is screened from approximately 20 to 40 feet bgs.

SVE Test Equipment

A 250 standard cubic feet per minute (scfm) thermal oxidizer with a 15-horsepower (hp) liquid-ring pump/blower was used to apply wellhead vacuum and extract soil vapors from individual vapor extraction wells. A 25-hp propane generator rated at 49 KVA was used to power the thermal oxidizer. Liquid propane was also used as supplemental fuel to maintain combustion temperatures in the thermal oxidizer.

SVE Test Procedure

Stratus conducted three individual well SVE tests using wells VW-1, VW-2, and MW-4. The liquid ring pump/blower was used to apply vacuum to a 2-inch diameter schedule 80 PVC pipe connecting the vapor extraction well and the negative side of the liquid ring pump/blower. The wellheads of the vapor extraction well and the observation wells (the two wells not used for extraction during each test) were temporarily modified to provide a seal for vacuum conditions to extract soil vapors and to measure induced vacuum. Magnahelic gauges were used to measure induced vacuum at the wellheads. Influent soil vapor concentrations were monitored using a photo-ionization detector (PID). Other parameters measured during the test include influent flow rate, applied vacuum, system operating temperatures, and influent and effluent concentrations. All observations were recorded on field data sheets, which are included in Appendix A and summarized on Tables 1 through 3.

Two influent soil vapor samples were collected during each SVE test and forwarded to a state-certified analytical laboratory for chemical analysis. An effluent air sample was also collected to verify the destruction efficiency of the SVE system. Air samples were retained in laboratory supplied tedlar bags, appropriately labeled, and stored at ambient air temperature within a protective container. Strict chain-of-custody procedures were maintained until samples were delivered to a laboratory representative.

Laboratory Analytical Methods

The air samples collected during the SVE tests were forwarded to Alpha Analytical, Inc., a state-certified analytical laboratory (ELAP No. 2019), for chemical analysis. The air samples were analyzed for gasoline range organics (GRO) using USEPA Method SW8015B/DHS LUFT Manual, and for BTEX, MTBE, tertiary butyl alcohol (TBA), diisopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), and tertiary amyl methyl ether (TAME) using USEPA Method SW8260B. Soil vapor analytical results are presented in Table 4. Certified analytical reports with chain-of-custody documentation are included in Appendix B.

Radius of Influence Analysis

The induced vacuum data collected during the SVE tests was evaluated in relation to the applied vacuum to estimate ROI. The effective ROI (soil vapor) has been defined as the radial distance from an extraction well at which recorded vacuum levels suggest that subsurface air flow occurs and is presumed to be sufficient for remediation (P.C. Johnson et al, 1990). Air-modeling studies conducted by others suggest that the distance from the extraction well at which one percent of the applied wellhead vacuum occurs can be interpreted as an effective ROI (Chevron, 1991, P.C Johnson, 1988).

SVE Test Results

Test 1 – SVE Test Using Well MW-4

The SVE test using well MW-4 was conducted for approximately 3 hours on April 6, 2006. During this test, wells VW-1 and VW-2 were used as observation wells to monitor for induced vacuum. Table 1 presents the tabulated summary for field data collected during this test. The results of Test 1 are summarized below.

- An average applied vacuum of 34 inches water column (“WC) resulted in an average field flow rate of 29.92 cfm.
- Low levels of induced vacuum (0.03 “WC) were observed in observation wells VW-1 and VW-2. These average induced vacuum levels were less than 1 percent of the applied vacuum and wellhead vacuum.
- Given that wells VW-1 and VW-2 are situated approximately 68 and 67 feet bgs, respectively, from extraction well MW-4, ROI is estimated to be less than 67 feet based on the low induced vacuum levels observed.
- Measurable concentrations of hydrocarbons in soil vapor were not reported in PID measurements collected during testing activities
- Petroleum hydrocarbon and fuel additive concentrations were reported below laboratory detection limits for samples collected from the extracted soil vapor.

Test 2 – SVE Test Using Well VW-2

The SVE test using well VW-2 was conducted for approximately 3 hours on April 6, 2006. During this test, wells VW-1 and MW-4 were used as observation wells to monitor for induced vacuum. Table 2 presents the tabulated summary for field data collected during this test. The results of Test 2 are summarized below.

- An average applied vacuum of 54.4 “WC resulted in an average field flow rate of 54.12 cfm.
- Average induced vacuum measurements of 0.23 “WC and 0.08 ”WC were observed at wells VW-1 and MW-4, respectively. These average induced vacuum levels were less than 1 percent of the applied vacuum and wellhead vacuum.
- Well VW-1 is situated approximately 26 feet from extraction well VW-2. Based on the 0.23 ”WC average induced vacuum reported at well VW-1 during Test 2, the ROI around well VW-2 is estimated to be 25 feet at the 54.4 “WC applied vacuum.

- Measurable concentrations of hydrocarbons in soil vapor were not reported in PID measurements collected during testing activities.
- Petroleum hydrocarbon and fuel additive concentrations were reported below laboratory detection limits for samples collected from the extracted soil vapor.

Test 3 – SVE Test Using Well VW-1

The SVE test using well VW-1 was conducted for approximately 3 hours on April 6, 2006. During this test, wells VW-2 and MW-4 were used as observation wells to monitor for induced vacuum. Table 3 presents the tabulated summary for field data collected during the test. The results of Test 3 are summarized below.

- An average applied vacuum of 54.4 "WC resulted in an average field flow rate of 31.11 cfm.
- Average induced vacuum measurements of 0.35 "WC and 0.05 "WC were observed at wells VW-2 and MW-4, respectively. These average induced vacuum levels were less than 1 percent of the applied vacuum, but were more than 1 percent of wellhead vacuum.
- The ROI is estimated to be approximately 25 feet for Test 3.
- Measurable concentrations of hydrocarbons in soil vapor were not reported in PID measurements collected during testing activities.
- Petroleum hydrocarbon and fuel additive concentrations were reported below laboratory detection limits for samples collected from the extracted soil vapor.

RECOMMENDATION

Given that petroleum hydrocarbon concentrations were reported below laboratory detection limits in each of the extracted soil vapor samples, and groundwater concentrations beneath the site currently meet state-established water quality objectives, closure of the environmental case at the site appears warranted.

LIMITATIONS

This report was prepared in general accordance with accepted standards of care that existed at the time this work was performed. No other warranty, expressed or implied, is made. Conclusions and recommendations are based on field observations and data obtained from this work and previous investigations. It should be recognized that definition and evaluation of geologic conditions is a difficult and inexact art. Judgments leading to conclusions and recommendations are generally made with an incomplete

knowledge of the subsurface conditions present. More extensive studies may be performed to reduce uncertainties. This report is solely for the use and information of our client unless otherwise noted.

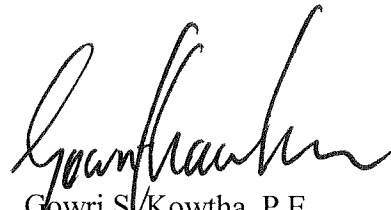
If you have any questions or comments concerning this document, please contact Gowri Kowtha at (530) 676-6001.

Sincerely,

STRATUS ENVIRONMENTAL, INC.



Scott G. Bittinger
Project Geologist



Gowri S. Kowtha, P.E.
Project Manager

| | | |
|--------------|------------|---|
| Attachments: | Table 1 | Soil Vapor Extraction Test at Well MW-4 |
| | Table 2 | Soil Vapor Extraction Test at Well VW-2 |
| | Table 3 | Soil Vapor Extraction Test at Well VW-1 |
| | Table 4 | Soil Vapor Analytical Results |
| | Figure 1 | Site Location Map |
| | Figure 2 | Site Plan |
| | Appendix A | Field Data Sheets |
| | Appendix B | Certified Analytical Reports and Chain-of-Custody Documentation |

cc: Mr. Bal Soin, Kwik Serv Fueling Station
Ms. Christyl Escarda, Central Valley Regional Water Quality Control Board
Ms. Loni Adams, Sacramento Metropolitan Air Quality Management District

Table 1
Soil Vapor Extraction Test at Well MW-4
 Kwik Serv Fueling Station
 2400 Fruitridge Road, Sacramento, California

| Date and Time | Hour Meter Reading (hours) | Time Elapsed (hours) | Applied Vac | Wellhead Vac | Inf Air Flow ^{1,2} cfm | PID | | Induced Vacuum in Observation Wells | |
|--|------------------------------|----------------------|---|--------------|---------------------------------|---|------|-------------------------------------|------|
| | | | | | | Inf | Eff | VW-1 | VW-2 |
| | | | "WC | "WC | | ppmv | ppmv | Vac* | Vac* |
| 4/6/06 4:30 | 84.40 | 0.00 | Start SVE test using well MW-4. Hour meter reading of SVE system = 84.4 | | | | | | |
| 4/6/06 4:30 | 84.40 | 0.00 | 34.0 | 30.0 | 17.46 | 0.0 | 0.0 | 0.00 | 0.00 |
| 4/6/06 5:00 | 84.90 | 0.50 | 34.0 | 30.0 | 30.58 | 0.0 | 0.0 | 0.00 | 0.00 |
| 4/6/06 5:30 | 85.30 | 0.90 | 34.0 | 30.0 | 28.70 | 0.0 | 0.0 | 0.04 | 0.05 |
| 4/6/06 6:00 | 85.90 | 1.50 | 34.0 | 30.0 | 30.32 | 0.0 | 0.0 | 0.025 | 0.05 |
| 4/6/06 6:30 | 86.40 | 2.00 | 34.0 | 28.0 | 37.37 | 0.0 | 0.0 | 0.04 | 0.05 |
| 4/6/06 7:00 | 87.10 | 2.70 | 34.0 | 28.0 | 21.61 | 0.0 | 0.0 | 0.04 | 0.04 |
| 4/6/06 7:30 | 87.40 | 3.00 | 34.0 | 28.0 | 43.41 | 0.0 | 0.0 | 0.03 | 0.04 |
| 4/6/06 7:30 | Discontinue SVE at well MW-4 | | | | | | | | |
| Average | -- | -- | 34.0 | 29.1 | 29.92 | 0.00 | 0.00 | 0.03 | 0.03 |
| Highest induced vacuum, "WC | | | | | | | | | |
| Approximate distance to extraction well (MW-4), feet | | | | | | | | | |
| Extraction well (MW-4) screened interval = 20 - 40 feet bgs | | | | | | | | | |
| | | | | | | | | 3-18 | 3-18 |
| Notes: Vac = Vacuum "WC = Inches water column PID = Photo Ionization Detector cfm = cubic feet per minute Time Elapsed = Difference of hour meter reading since the start-up * All induced vacuum in observation wells measured in "WC ¹ Flow = Velocity x Area of Pipe (e.g.: flow rate = 800 feet per minute X 0.0218 sq.ft) ² Flow = Field Flow | | | | | | | | | |
| | | | | | | Inf = Influent Eff = Effluent ppmv = parts per million by volume bgs = below ground surface -- = not applicable | | | |

Table 2
Soil Vapor Extraction Test at Well VW-2
 Kwik Serv Fueling Station
 2400 Fruitridge Road, Sacramento, California

| Date and Time | Hour Meter Reading (hours) | Time Elapsed (hours) | Applied Vac | Wellhead Vac | Inf Air Flow ^{1,2} cfm | PID | | Induced Vacuum in Observation Wells | |
|---------------|----------------------------|----------------------|--|--------------|---|------|------|-------------------------------------|-------|
| | | | | | | Inf | Eff | VW-1 | MW-4 |
| | | | "WC | "WC | | ppmv | ppmv | Vac* | Vac* |
| 4/6/06 7:30 | 87.40 | 0.00 | | | Start SVE test using well VW-2. Hour meter reading of SVE system = 87.4 | | | | |
| 4/6/06 7:30 | 87.40 | 0.00 | 54.4 | 36 | 41.86 | 0.0 | 0.0 | 0.14 | 0.10 |
| 4/6/06 8:00 | 88.00 | 0.60 | 54.4 | 46 | 26.34 | 0.0 | 0.0 | 0.24 | 0.08 |
| 4/6/06 8:30 | 88.40 | 1.00 | 54.4 | 46 | 56.75 | 0.0 | 0.0 | 0.22 | 0.09 |
| 4/6/06 9:00 | 88.90 | 1.50 | 54.4 | 46 | 68.60 | 0.0 | 0.0 | 0.22 | 0.07 |
| 4/6/06 9:30 | 89.40 | 2.00 | 54.4 | 46 | 64.82 | 0.0 | 0.0 | 0.26 | 0.10 |
| 4/6/06 10:00 | 89.90 | 2.50 | 54.4 | 46 | 59.58 | 0.0 | 0.0 | 0.25 | 0.06 |
| 4/6/06 10:30 | 90.40 | 3.00 | 54.4 | 46 | 60.89 | 0.0 | 0.0 | 0.25 | 0.06 |
| 4/6/06 10:30 | | | Discontinue SVE at well VW-2 | | | | | | |
| Average | -- | -- | 54.40 | 44.57 | 54.12 | 0.00 | 0.00 | 0.23 | 0.08 |
| | | | Highest induced vacuum, "WC | | | | | | |
| | | | Approximate distance to extraction well (VW-2), feet | | | | | | |
| | | | Extraction well (VW-2) screened interval = 3 - 18 feet bgs | | | | | | |
| | | | | | | | | 26 | 67 |
| | | | | | | | | 3-18 | 20-40 |

Notes:

Vac = Vacuum

"WC = Inches water column

PID = Photo Ionization Detector

cfm = cubic feet per minute

Time Elapsed = Difference of hour meter reading since the start-up

* All induced vacuum in observation wells measured in "WC

¹Flow = Velocity x Area of Pipe (e.g.: flow rate = 1918 feet per minute X 0.0218 sq.ft)

²Flow = Field Flow

Inf = Influent

Eff = Effluent

ppmv = parts per million by volume

bgs = below ground surface

-- = not applicable

Table 3
Soil Vapor Extraction Test at Well VW-1
 Kwik Serv Fueling Station
 2400 Fruitridge Road, Sacramento, California

| Date and Time | Hour Meter Reading (hours) | Time Elapsed (hours) | Applied Vac | Wellhead Vac | Inf Air Flow ^{1,2} cfm | PID | | Induced Vacuum in Observation Wells | |
|---|----------------------------|----------------------|------------------------------|--------------|---|------|------|-------------------------------------|-------|
| | | | | | | Inf | Eff | VW-2 | MW-4 |
| | | | "WC | "WC | | ppmv | ppmv | Vac* | Vac* |
| 4/6/06 10:30 | 90.40 | 0.00 | | | Start SVE test using well VW-1. Hour meter reading of SVE system = 90.4 | | | | |
| 4/6/06 10:30 | 90.50 | 0.10 | 54.4 | 26 | 26.41 | 0.0 | 0.0 | 0.38 | 0.10 |
| 4/6/06 11:00 | 90.90 | 0.50 | 54.4 | 26 | 25.58 | 0.0 | 0.0 | 0.37 | 0.06 |
| 4/6/06 11:30 | 91.40 | 1.00 | 54.4 | 26 | 32.74 | 0.0 | 0.0 | 0.40 | 0.10 |
| 4/6/06 12:00 | 91.90 | 1.50 | 54.4 | 26 | 27.28 | 0.0 | 0.0 | 0.32 | 0.02 |
| 4/6/06 12:30 | 92.40 | 2.00 | 54.4 | 26 | 35.16 | 0.0 | 0.0 | 0.34 | 0.04 |
| 4/6/06 13:00 | 92.90 | 2.50 | 54.4 | 26 | 34.27 | 0.0 | 0.0 | 0.33 | 0.04 |
| 4/6/06 13:30 | 93.40 | 3.00 | 54.4 | 26 | 36.32 | 0.0 | 0.0 | 0.32 | 0.01 |
| 4/6/06 13:30 | | | Discontinue SVE at well VW-1 | | | | | | |
| Average | -- | -- | 54.40 | 26.00 | 31.11 | 0.00 | 0.00 | 0.35 | 0.05 |
| Highest induced vacuum, "WC | | | | | | | | | |
| Approximate distance to extraction well (VW-1), feet | | | | | | | | | |
| Extraction well (VW-1) screened interval = 3 - 18 feet bgs | | | | | | | | | |
| | | | | | | | | 26 | 68 |
| | | | | | | | | 3-18 | 20-40 |
| Notes: Vac = Vacuum "WC = Inches water column PID = Photo Ionization Detector cfm = cubic feet per minute Time Elapsed = Difference of hour meter reading since the start-up * All induced vacuum in observation wells measured in "WC ¹ Flow = Velocity x Area of Pipe (e.g.: flow rate = 1918 feet per minute X 0.0218 sq.ft) ² Flow = Field Flow | | | | | | | | | |
| Inf = Influent Eff = Effluent ppmv = parts per million by volume bgs = below ground surface -- = not applicable | | | | | | | | | |

Table 4
Soil Vapor Analytical Results
 Kwik Serv Fueling Station
 2400 Fruitridge Road
 Sacramento, California

| Sample Date | Sample Time | Sample ID | Test Well | GRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | MTBE | TBA | DIPE | ETBE | TAME |
|--------------------------------|-------------|-----------|-----------|-----|---------|---------|--------------|---------------|-------|------|-------|-------|-------|
| <u>Influent Samples</u> | | | | | | | | | | | | | |
| 04/06/06 | 5:05 | INF MW-4 | MW-4 | <15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <7.5 | <0.30 | <0.30 | <0.30 |
| 04/06/06 | 7:30 | INF MW-4 | MW-4 | <15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <7.5 | <0.30 | <0.30 | <0.30 |
| 04/06/06 | 8:15 | INF VW-2 | VW-2 | <25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <13 | <0.50 | <0.50 | <0.50 |
| 04/06/06 | 10:25 | INF VW-2 | VW-2 | <15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <7.5 | <0.30 | <0.30 | <0.30 |
| 04/06/06 | 11:00 | INF VW-1 | VW-1 | <15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <7.5 | <0.30 | <0.30 | <0.30 |
| 04/06/06 | 13:25 | INF VW-1 | VW-1 | <15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <7.5 | <0.30 | <0.30 | <0.30 |
| <u>Effluent Sample</u> | | | | | | | | | | | | | |
| 04/06/06 | 6:30 | EFF | MW-4 | <15 | <0.15 | <0.15 | <0.15 | <0.15 | <0.15 | <7.5 | <0.30 | <0.30 | <0.30 |

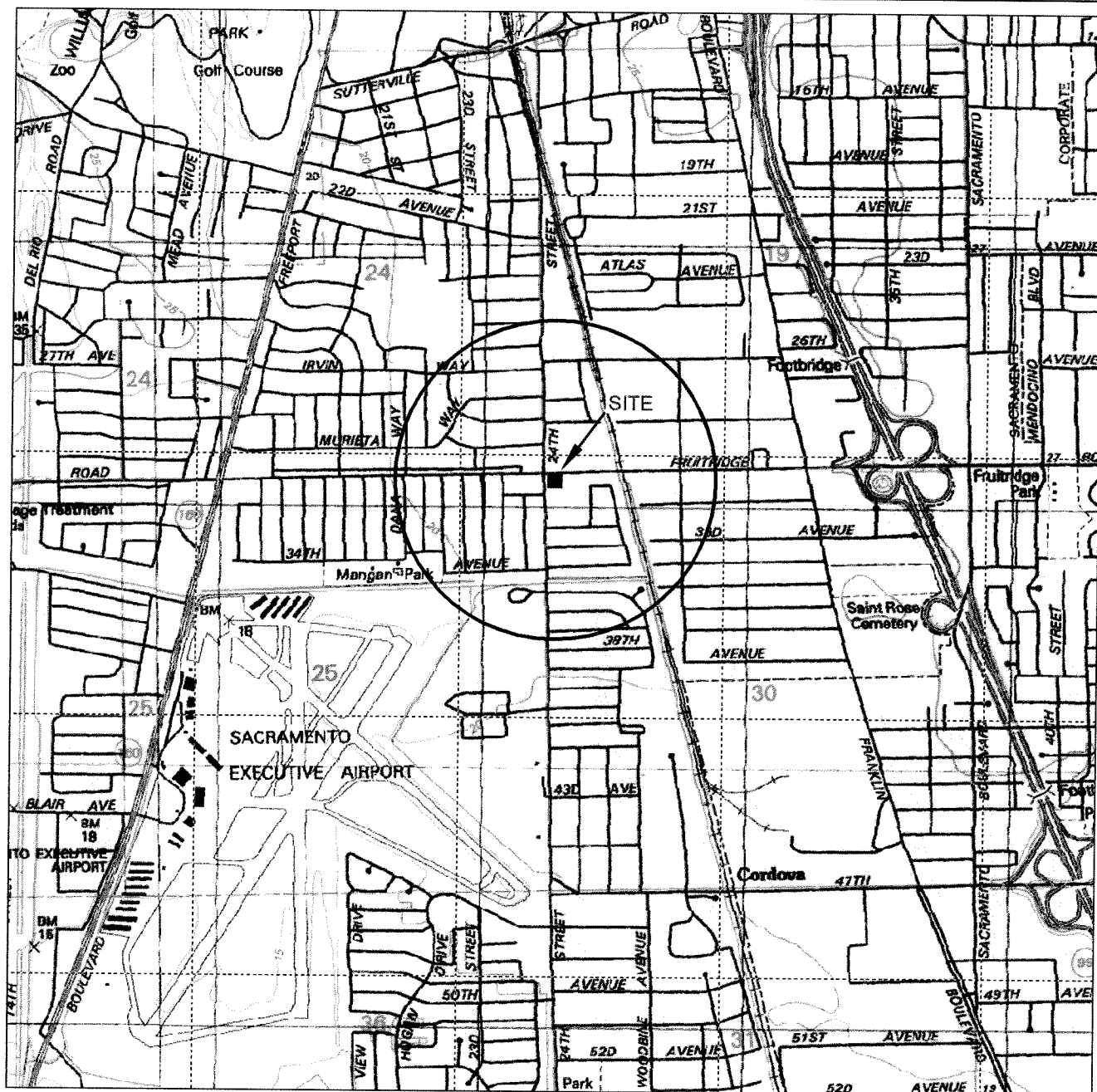
Notes:

All results reported are in milligrams per cubic meter (mg/m³)

GRO = Gasoline Range Organics
 BTEX = Benzene, toluene, ethylbenzene, and total xylenes
 MTBE = Methyl tertiary butyl ether
 TBA = Tertiary butyl alcohol
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tertiary butyl ether
 TAME = Tertiary amyl methyl ether

Analytical Laboratory
 Alpha Analytical, Inc. (ELAP # 2019)

Analytical Methods
 GRO analyzed by EPA Method SW8015B/DHS LUFT Manual
 BTEX, MTBE, TBA, DIPE, ETBE, & TAME analyzed by EPA Method SW8260B



GENERAL NOTES:
 BASE MAP FROM U.S.G.S.
 SACRAMENTO, CA.
 7.5 MINUTE TOPOGRAPHIC
 PHOTOREVISED 1980



QUADRANGLE LOCATION



SCALE 1:24,000

STRATUS
 ENVIRONMENTAL, INC.

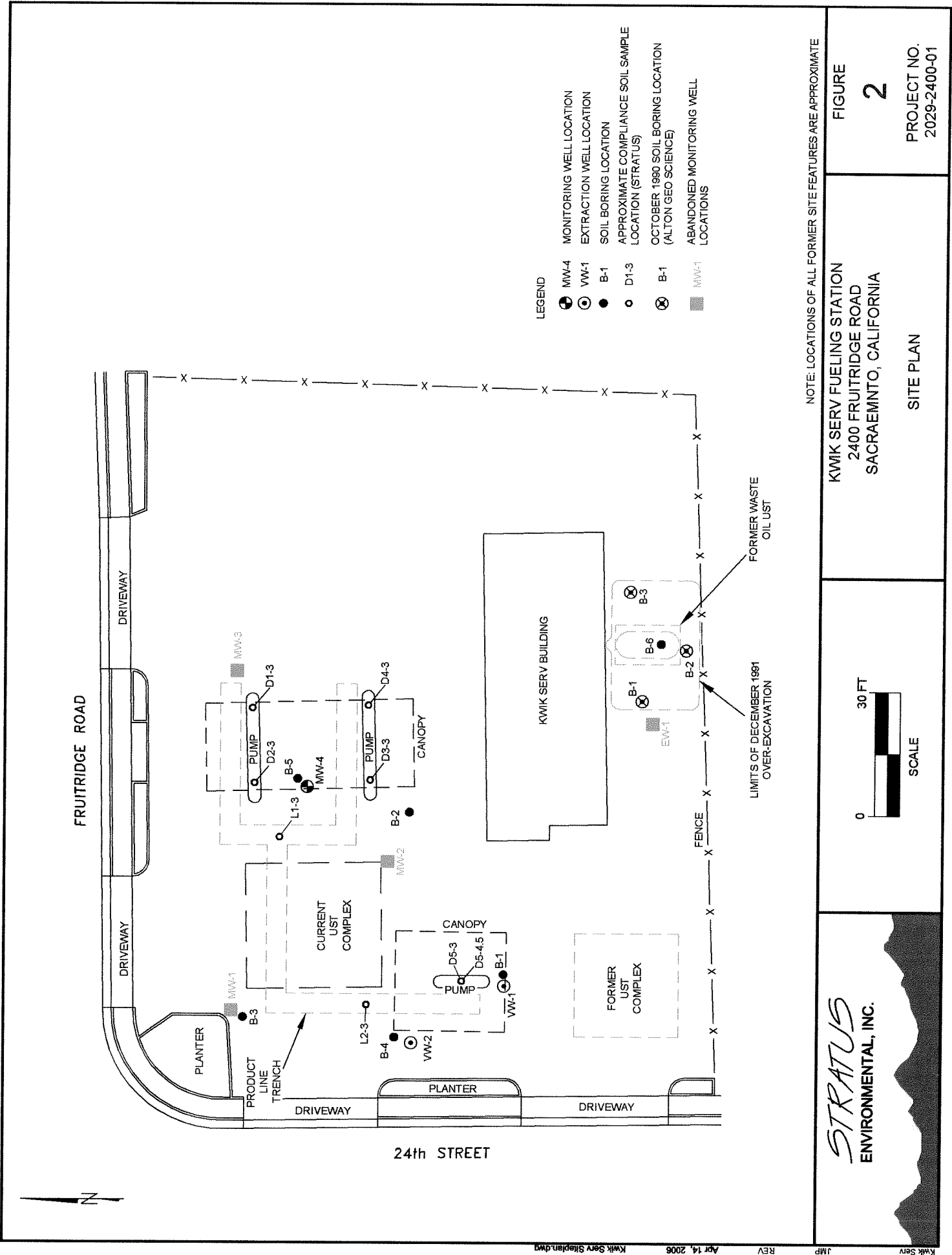
KWIK SERV FUELING STATION
 2400 FRUITRIDGE ROAD
 SACRAMENTO, CALIFORNIA

SITE LOCATION MAP

FIGURE

1

PROJECT NO.
 2029-2400-01



APPENDIX A

FIELD DATA SHEETS

Site Name & Address

Kwik Murt

ORIGINAL

4-6-06

Test Operators

CHILL

Test Well ID

MW-4 - VW-2

Test Operators

Marty

Equipment Model and Serial Nos.

250TCAT M1398

PID Model

Min. RATE 2000

| Date & Time | Hour Meter Reading hrs | Applied Vacuum "wC | Inf Air Flow Rate FPM cfm | Sys Inf Air Flow Rate cfm | Influent Air Temp deg F | Control Temp deg F | Effluent Air Temp deg F | Influent PID ppmv | Effluent PID ppmv | Comments/Notes |
|-------------|------------------------|--------------------|---------------------------|---------------------------|-------------------------|--------------------|-------------------------|-------------------|-------------------|--------------------|
| 4000 | 84.4 | 2.5 | 48/800 | 29 | 48 | 1490 | 294 | 2 | 2 | Start on MW-4 0430 |
| 0500 | 84.9 | 2.5 | 54/401 | 39 | 54 | 1463 | 283 | 2 | 2 | INF 0505 |
| 0530 | 85.3 | 2.5 | 50/1315 | 25 | 50 | 1458 | 292 | 2 | 2 | |
| 0600 | 85.9 | 2.5 | 49/1389 | 22 | 49 | 1453 | 294 | 2 | 2 | |
| 0630 | 86.4 | 2.5 | 50/1112 | 22 | 50 | 1450 | 294 | 2 | 2 | EFF 0630 |
| 0700 | 87.1 | 2.5 | 50/990 | 23 | 50 | 1457 | 294 | 2 | 2 | |
| 0730 | 87.4 | 2.5 | 50/1489 | 23 | 50 | 1452 | 294 | 2 | 2 | INF 0730 |
| 0730 | 87.4 | 4.0 | 50/1918 | 45 | 50 | 1455 | 294 | 2 | 2 | Start on VW-2 0730 |
| 0800 | 88.0 | 4.0 | 50/1207 | 48 | 50 | 1450 | 289 | 2 | 2 | |
| 0830 | 88.4 | 4.0 | 50/2600 | 48 | 50 | 1458 | 290 | 2 | 2 | INF 0815 |
| 0900 | 88.9 | 4.0 | 57/2143 | 47 | 57 | 1450 | 295 | 2 | 2 | |
| 0930 | 89.4 | 4.0 | 54/2470 | 46 | 54 | 1456 | 310 | 2 | 2 | |
| 1000 | 89.9 | 4.0 | 58/2130 | 47 | 58 | 1457 | 287 | 2 | 2 | |
| 1030 | 90.4 | 4.0 | 58/2190 | 47 | 58 | 1450 | 289 | 2 | 2 | INF 1025 |

INF Flow 2" pipe sch 80

Calibrate PID 1000PM 10

STRATUS



Site Name &
Address

Kwik Sew

Date

4-8-06

Test Operators

CHILL

Test Well ID

MW-4

Marty

| Date & Time | | Induced Vacuum ("WC) & Depth to Water (feet bgs) | | | | | | | | | | Comments/Notes |
|-------------|------|--|-------------|-------------|--|--|--|--|--|--|--|--------------------|
| | | MW-4 VAC | VW-1 VAC | VW-2 VAC | | | | | | | | |
| 430 | 30 | 0.04 | 0.04 | 0.05 | | | | | | | | Dye DTB |
| 500 | 30 | 0.04 | 0.04 | 0.05 | | | | | | | | MW-4 27.81 |
| 530 | 30 | 0.04 | 0.04 | 0.05 | | | | | | | | VW-1 16.69 17 |
| 600 | 30 | 0.04 | 0.04 | 0.05 | | | | | | | | VW-2 — 17.6 |
| 630 | 28 | 0.04 | 0.04 | 0.05 | | | | | | | | |
| 700 | 28 | 0.04 | 0.04 | 0.05 | | | | | | | | |
| 730 | 28 | 0.03 | 0.03 | 0.04 | | | | | | | | |
| 730 | 0.1 | 0.14 | 0.14 | 0.16 | | | | | | | | start on VW-2 0730 |
| 800 | 0.08 | 0.24 | 0.24 | 0.26 | | | | | | | | |
| 830 | 0.09 | 0.22 | 0.22 | 0.24 | | | | | | | | |
| 900 | 0.07 | 0.22 | 0.22 | 0.24 | | | | | | | | |
| 930 | 0.10 | 0.20 | 0.20 | 0.22 | | | | | | | | |
| 1000 | 0.06 | 0.25 | 0.25 | 0.26 | | | | | | | | |
| 1030 | 0.06 | 0.25 | 0.25 | 0.26 | | | | | | | | |

STRATUS

Site Name & Address Kwik Mm 4
Santa
 Test Well ID Ww-1
 Date 4-6-2006
 Test Operators CHILL
Marty
 Equipment Model and Serial Nos. 250TCAT M1395
 PID Model Mm1 R4E 2000

[illegible]

STRATUS

APPENDIX B

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

**COPY
FILE COPY**

ANALYTICAL REPORT

APR 24 2006

Stratus Environmental
3330 Cameron Park Drive
Cameron Park, CA 956828861

Attn: Gowri Kowtha
Phone: (530) 676-6001
Fax: (530) 676-6005
Date Received : 04/07/06

Job#: Kwik Serv

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B/DHS LUFT Manual
Volatile Organic Compounds (VOCs) EPA Method SW8260B

| | Parameter | Concentration | Reporting Limit | Date Sampled | Date Analyzed |
|----------------------|-----------------------------------|---------------|------------------------|-----------------|------------------|
| Client ID : | TPH-P (GRO) | ND | 15 mg/m ³ | 04/06/06 | 04/13/06 |
| Kwik Serv A INF VW-1 | Tertiary Butyl Alcohol (TBA) | ND | 7.5 mg/m ³ | 04/06/06 | 04/13/06 |
| Lab ID : | Methyl tert-butyl ether (MTBE) | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| STR06040743-01A | Di-isopropyl Ether (DIPE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethyl Tertiary Butyl Ether (ETBE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Benzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Tertiary Amyl Methyl Ether (TAME) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Toluene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethylbenzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | m,p-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | o-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| Client ID : | TPH-P (GRO) | ND | 15 mg/m ³ | 04/06/06 | 04/13/06 |
| Kwik Serv A INF VW-1 | Tertiary Butyl Alcohol (TBA) | ND | 7.5 mg/m ³ | 04/06/06 | 04/13/06 |
| Lab ID : | Methyl tert-butyl ether (MTBE) | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| STR06040743-02A | Di-isopropyl Ether (DIPE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethyl Tertiary Butyl Ether (ETBE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Benzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Tertiary Amyl Methyl Ether (TAME) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Toluene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethylbenzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | m,p-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | o-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| Client ID : | TPH-P (GRO) | ND | 25 mg/m ³ | 04/06/06 | 04/13/06 |
| Kwik Serv A INF VW-2 | Tertiary Butyl Alcohol (TBA) | ND | 13 mg/m ³ | 04/06/06 | 04/13/06 |
| Lab ID : | Methyl tert-butyl ether (MTBE) | ND | 0.25 mg/m ³ | 04/06/06 | 04/13/06 |
| STR06040743-03A | Di-isopropyl Ether (DIPE) | ND | 0.50 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethyl Tertiary Butyl Ether (ETBE) | ND | 0.50 mg/m ³ | 04/06/06 | 04/13/06 |
| | Benzene | ND | 0.25 mg/m ³ | 04/06/06 | 04/13/06 |
| | Tertiary Amyl Methyl Ether (TAME) | ND | 0.50 mg/m ³ | 04/06/06 | 04/13/06 |
| | Toluene | ND | 0.25 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethylbenzene | ND | 0.25 mg/m ³ | 04/06/06 | 04/13/06 |
| | m,p-Xylene | ND | 0.25 mg/m ³ | 04/06/06 | 04/13/06 |
| | o-Xylene | ND | 0.25 mg/m ³ | 04/06/06 | 04/13/06 |



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| | | | | | |
|-----------------------------|-----------------------------------|----|------------------------|----------|----------|
| Client ID : | TPH-P (GRO) | ND | 15 mg/m ³ | 04/06/06 | 04/13/06 |
| Kwik Serv A INF VW-2 | Tertiary Butyl Alcohol (TBA) | ND | 7.5 mg/m ³ | 04/06/06 | 04/13/06 |
| Lab ID : | Methyl tert-butyl ether (MTBE) | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| STR06040743-04A | Di-isopropyl Ether (DIPE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethyl Tertiary Butyl Ether (ETBE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Benzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Tertiary Amyl Methyl Ether (TAME) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Toluene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethylbenzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | m,p-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | o-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| Client ID : | TPH-P (GRO) | ND | 15 mg/m ³ | 04/06/06 | 04/13/06 |
| Kwik Serv A INF MW-4 | Tertiary Butyl Alcohol (TBA) | ND | 7.5 mg/m ³ | 04/06/06 | 04/13/06 |
| Lab ID : | Methyl tert-butyl ether (MTBE) | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| STR06040743-05A | Di-isopropyl Ether (DIPE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethyl Tertiary Butyl Ether (ETBE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Benzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Tertiary Amyl Methyl Ether (TAME) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Toluene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethylbenzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | m,p-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | o-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| Client ID : | TPH-P (GRO) | ND | 15 mg/m ³ | 04/06/06 | 04/13/06 |
| Kwik Serv A INF MW-4 | Tertiary Butyl Alcohol (TBA) | ND | 7.5 mg/m ³ | 04/06/06 | 04/13/06 |
| Lab ID : | Methyl tert-butyl ether (MTBE) | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| STR06040743-06A | Di-isopropyl Ether (DIPE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethyl Tertiary Butyl Ether (ETBE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Benzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Tertiary Amyl Methyl Ether (TAME) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Toluene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethylbenzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | m,p-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | o-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| Client ID : | TPH-P (GRO) | ND | 15 mg/m ³ | 04/06/06 | 04/13/06 |
| Kwik Serv A EFF | Tertiary Butyl Alcohol (TBA) | ND | 7.5 mg/m ³ | 04/06/06 | 04/13/06 |
| Lab ID : | Methyl tert-butyl ether (MTBE) | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| STR06040743-07A | Di-isopropyl Ether (DIPE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethyl Tertiary Butyl Ether (ETBE) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Benzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Tertiary Amyl Methyl Ether (TAME) | ND | 0.30 mg/m ³ | 04/06/06 | 04/13/06 |
| | Toluene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | Ethylbenzene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | m,p-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |
| | o-Xylene | ND | 0.15 mg/m ³ | 04/06/06 | 04/13/06 |



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Gasoline Range Organics (GRO) C4-C13

Note: Concentrations of air in Tedlar Bags are at 21 degrees Celsius and 25.47 inches of mercury.

ND = Not Detected

Roger Scholl

Randy Gardner

Walter Hinchman

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / info@alpha-analytical.com

PS

4/14/06

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
17-Apr-06

QC Summary Report

Work Order:
06040743

Method Blank

File ID: C:\HPCHEM\MS10\DATA\060413\06041306.D

Type MBLK

Test Code: EPA Method SW8015B/DHS LUFT Manual

Batch ID: MS10A0413B

Analysis Date: 04/13/2006 09:18

Sample ID: MBLK MS10A0413B

Units : mg/m³

Run ID: MSD_10_060413A

Prep Date: 04/13/2006

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LowLimit | HighLimit | RPDRefVal | %RPD(Limit) | Qual |
|-----------------------------|--------|-----|--------|-----------|------|----------|-----------|-----------|-------------|------|
| TPH-P (GRO) | ND | 10 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 1.83 | | 2 | | 92 | 76 | 127 | | | |
| Surr: Toluene-d8 | 1.87 | | 2 | | 94 | 84 | 113 | | | |
| Surr: 4-Bromofluorobenzene | 1.84 | | 2 | | 92 | 79 | 119 | | | |

Laboratory Control Spike

File ID: C:\HPCHEM\MS10\DATA\060413\06041303.D

Type LCS

Test Code: EPA Method SW8015B/DHS LUFT Manual

Batch ID: MS10A0413B

Analysis Date: 04/13/2006 08:14

Sample ID: GLCS MS10A0413B

Units : mg/m³

Run ID: MSD_10_060413A

Prep Date: 04/13/2006

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LowLimit | HighLimit | RPDRefVal | %RPD(Limit) | Qual |
|-----------------------------|--------|-----|--------|-----------|------|----------|-----------|-----------|-------------|------|
| TPH-P (GRO) | 397 | 10 | 400 | | 99 | 78 | 127 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10.4 | | 10 | | 104 | 76 | 127 | | | |
| Surr: Toluene-d8 | 9.49 | | 10 | | 95 | 84 | 113 | | | |
| Surr: 4-Bromofluorobenzene | 9.29 | | 10 | | 93 | 79 | 119 | | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:

17-Apr-06

OC Summary Report

Work Order:

06040743

Method Blank

Type MBLK Test Code: EPA Method SW8260B

File ID: C:\HPCHEM\MS10\DATA\060413\06041306.D

Batch ID: MS10A0413A

Analysis Date: 04/13/2006 09:18

Sample ID: MBLK MS10A0413A

Units : mg/m³

Run ID: MSD_10_060413A

Prep Date: 04/13/2006

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LowLimit | HighLimit | RPDRefVal | %RPD(Limit) | Qual |
|-----------------------------------|--------|-----|--------|-----------|------|----------|-----------|-----------|-------------|------|
| Tertiary Butyl Alcohol (TBA) | ND | 5 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 0.1 | | | | | | | | |
| Di-isopropyl Ether (DIPE) | ND | 0.2 | | | | | | | | |
| Ethyl Tertiary Butyl Ether (ETBE) | ND | 0.2 | | | | | | | | |
| Benzene | ND | 0.1 | | | | | | | | |
| Tertiary Amyl Methyl Ether (TAME) | ND | 0.2 | | | | | | | | |
| Toluene | ND | 0.1 | | | | | | | | |
| Ethylbenzene | ND | 0.1 | | | | | | | | |
| m,p-Xylene | ND | 0.1 | | | | | | | | |
| o-Xylene | ND | 0.1 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 1.83 | | 2 | | 92 | 76 | 127 | | | |
| Surr: Toluene-d8 | 1.87 | | 2 | | 94 | 84 | 113 | | | |
| Surr: 4-Bromofluorobenzene | 1.84 | | 2 | | 92 | 79 | 119 | | | |

Laboratory Control Spike

Type LCS Test Code: EPA Method SW8260B

File ID: C:\HPCHEM\MS10\DATA\060413\06041304.D

Batch ID: MS10A0413A

Analysis Date: 04/13/2006 08:35

Sample ID: LCS MS10A0413A

Units : mg/m³

Run ID: MSD_10_060413A

Prep Date: 04/13/2006

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LowLimit | HighLimit | RPDRefVal | %RPD(Limit) | Qual |
|-----------------------------|--------|-----|--------|-----------|------|----------|-----------|-----------|-------------|------|
| Benzene | 9.03 | 0.1 | 10 | | 90 | 81 | 122 | | | |
| Toluene | 9.4 | 0.1 | 10 | | 94 | 80 | 120 | | | |
| Ethylbenzene | 10.3 | 0.1 | 10 | | 103 | 80 | 120 | | | |
| m,p-Xylene | 10.3 | 0.1 | 10 | | 103 | 80 | 129 | | | |
| o-Xylene | 10.2 | 0.1 | 10 | | 102 | 80 | 129 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11.2 | | 10 | | 112 | 76 | 127 | | | |
| Surr: Toluene-d8 | 9.48 | | 10 | | 95 | 84 | 113 | | | |
| Surr: 4-Bromofluorobenzene | 9.78 | | 10 | | 98 | 79 | 119 | | | |

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Alpha Analytical, Inc.

Phone : (775) 355-1044 FAX : (775) 355-0406

Sample Receipt Checklist

Date Report is due to Client : 4/17/2006

Date of Notice : 4/7/2006 11:19:58 A

Please take note of any NO check marks. If we receive no response concerning these items within 24 hours of the date of this notice, all of the samples will be analyzed as requested.

Client Name: **Stratus Environmental**

Project ID : **Kwik Serv**

Project Manager: **Gowri Kowtha**

Client's EMail: **gkowtha@stratusinc.net**

Work Order Number: **STR06040743**

Client's Phone: **(530) 676-6001**

Client's FAX: **(530) 676-6005**

Date Received: **4/7/2006**

Received by: **Latricia Edrosa**

Chain of Custody (COC) Information

Carrier name: **FedEx**

| | | | |
|--|--|--|---|
| Chain of custody present ? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Custody seals intact on shipping container/cooler ? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | Not Present <input type="checkbox"/> |
| Custody seals intact on sample bottles ? | Yes <input type="checkbox"/> | <input type="checkbox"/> No | Not Present <input checked="" type="checkbox"/> |
| Chain of custody signed when relinquished and received ? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Chain of custody agrees with sample labels ? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Sample ID noted by Client on COC ? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Date and time of collection noted by Client on COC ? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Samplers's name noted on COC ? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Internal Chain of Custody (COC) requested ? | Yes <input type="checkbox"/> | <input checked="" type="checkbox"/> No | |
| Sub Contract Lab Used : | None <input checked="" type="checkbox"/> | <input type="checkbox"/> SEM | Other (see comments) <input type="checkbox"/> |

Sample Receipt Information

| | | | |
|--|---|-----------------------------|--------------------------------------|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | Not Present <input type="checkbox"/> |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |

Sample Preservation and Hold Time (HT) Information

| | | | |
|---|---|-----------------------------|--|
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| Container/Temp Blank temperature in compliance (0-6°C)? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | Cooler Temperature NA°C |
| Water - VOA vials have zero headspace / no bubbles? | Yes <input type="checkbox"/> | <input type="checkbox"/> No | No VOA vials submitted <input checked="" type="checkbox"/> |
| Sample labels checked for correct preservation? | Yes <input checked="" type="checkbox"/> | <input type="checkbox"/> No | |
| TOC Water - pH acceptable upon receipt (H2SO4 pH<2)? | Yes <input type="checkbox"/> | <input type="checkbox"/> No | N/A <input checked="" type="checkbox"/> |

Analytical Requirement Information

| | | | |
|--|------------------------------|--|---|
| Are non-Standard or Modified methods requested ? | Yes <input type="checkbox"/> | <input checked="" type="checkbox"/> No | |
| Are there client specific Project requirements ? | Yes <input type="checkbox"/> | <input checked="" type="checkbox"/> No | If YES : see the Chain of Custody (COC) |

Comments :

CHAIN-OF-CUSTODY RECORD

CA

WorkOrder : STR06040743

Client:

Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

Report Attention : Gowri Kowtha
CC Report :

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

Gowri Kowtha

TEL: (530) 676-6001 x
FAX: (530) 676-6005
Email: gkowitz@stratusinc.net

Job : Kwik Serv
PO :

Report Due By : 5:00 PM On : 17-Apr-06

EDD Required : Yes

Sampled by : C. Hill

Cooler Temp Samples Received Date Printed
NA °C 07-Apr-06 07-Apr-06

Client's COC # : 06809

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

| Alpha Sample ID | Client Sample ID | Matrix | Collection Date | No. of Bottles | | | Requested Tests | | Sample Remarks |
|-----------------|----------------------|--------|-----------------|----------------|-----|-----|-----------------|----------|----------------|
| | | | | ORG | SUB | TAT | TPHP_A | VOC_A | |
| STR06040743-01A | Kwik Serv A INF VW-1 | AR | 04/06/06 11:00 | 1 | 0 | 6 | GAS-N/C | BTEX/OXY | |
| STR06040743-02A | Kwik Serv A INF VW-1 | AR | 04/06/06 13:25 | 1 | 0 | 6 | GAS-N/C | BTEX/OXY | TEDLAR |
| STR06040743-03A | Kwik Serv A INF VW-2 | AR | 04/06/06 08:15 | 1 | 0 | 6 | GAS-N/C | BTEX/OXY | TEDLAR |
| STR06040743-04A | Kwik Serv A INF VW-2 | AR | 04/06/06 10:25 | 1 | 0 | 6 | GAS-N/C | BTEX/OXY | TEDLAR |
| STR06040743-05A | Kwik Serv A INF MW-4 | AR | 04/06/06 05:05 | 1 | 0 | 6 | GAS-N/C | BTEX/OXY | TEDLAR |
| STR06040743-06A | Kwik Serv A INF MW-4 | AR | 04/06/06 07:30 | 1 | 0 | 6 | GAS-N/C | BTEX/OXY | TEDLAR |
| STR06040743-07A | Kwik Serv A EFF | AR | 04/06/06 06:30 | 1 | 0 | 6 | GAS-N/C | BTEX/OXY | TEDLAR |

Comments: Security seals intact. Send copy of receipt checklist with final report.

Signature

Edna Edna

Print Name

Company

Alpha Analytical, Inc.

Date/Time

4/10/06 11:19

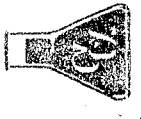
Logged in by:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other)

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
Phone (775) 355-1044
Fax (775) 355-0406



Client Name: Kwik Serv
Address: 3330 Cammeron Plk DR
City, State, Zip: Cammeron Plk DR
Phone Number: 530-676-6004 Fax: 530-676-6004

AZ CA NV WA
ID OR OTHER

Page # 1 of 1

| Client Name | | Job # | | Analyses Required | |
|------------------------------|--------------|----------------------|-----------------|--------------------|----------------------|
| Address | | E-Mail Address | | Required QC Level? | |
| City, State, Zip | | Phone # | | I II III IV | |
| Report Attention | | Fax # | | EDD/EDF? YES NO | |
| Sample Description | | TAT | | Global ID # | |
| Total and type of containers | | Field Filled | | REMARKS | |
| Time Sampled | Date Sampled | Matrix See Key Below | Office Use Only | Lab ID Number | Sampled by |
| 1400 | 4/6 | OT | STP | 01 | Kwik Serv A IAF Vw-1 |
| 1325 | 1 | OT | | -02 | Kwik Serv A IAF Vw-1 |
| 0815 | | OT | | -03 | Kwik Serv A IAF Vw-2 |
| 1025 | | OT | | -04 | Kwik Serv A IAF Vw-2 |
| 0505 | | OT | | -05 | Kwik Serv A IAF Mv-4 |
| 0750 | | OT | | -06 | Kwik Serv A IAF Mv-4 |
| 0730 | 4/6 | OT | | -07 | Kwik Serv A EFF |

ADDITIONAL INSTRUCTIONS:

| Signature | | Print Name | | Company | | Date | | Time | |
|--------------------|--|----------------|--|---------|--|--------|--|-------|--|
| <u>[Signature]</u> | | CHILL | | Starks | | 4/6/06 | | 1410 | |
| <u>[Signature]</u> | | Lisa Baylan | | ALPHA | | 4/6/06 | | 1410 | |
| <u>[Signature]</u> | | Katricea Edusa | | Alpha | | 4/7/06 | | 11:19 | |

*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other
NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory on this date.